Scientific and Technical Committee Recommendations
Phase 2 Program
July 10, 1992 meeting

At the July 10 meeting of the Committee to review the Phase 2 Work Plan, the following issues or concerns were raised by one or several individuals and were discussed at length. In some cases plans were in place that alleviate some or most of the concern. In none was there a disagreement over the benefit of addressing the issue fully. A wide variety of additional specific comments and concerns were supplied by committee members in their written comments to the Phase 2 Work Plan. Some of these comments were also raised during the July 10 meeting of the Scientific and Technical Committee

Preservation of Core Samples

The need to adequately preserve a complete portion of the various sediment core samples was emphasized. John Sanders discussed some coring methods and preservation procedures, which are provided in detail in his submitted comments (P-4). The committee was informed that the details of core sample preservation are discussed in the Sampling and Analysis Plan/Quality Assurance Project Plan and take into account some of Dr. Sanders' comments. The Sampling Plan can be reviewed when available; in the meantime further contact with John Sanders by TAMS should be maintained.

Water Column Sampling and Analysis

More consideration should be give to collection and analyses of samples downstream from Thompson Island. Sediment loads from tributaries such as the Battenkill and Hoosic Rivers may adsorb PCB's and become "sinks" via downstream disposition at high flow, and "sources" via desorption at low flow. The mechanisms acting in the Hudson differ substantially during high and low flows. Flow-averaged sampling may be inappropriate and misleading in certain circumstances (see submitted comments by George Putman, C-3).

Water column sampling would be desirable in area C. This will supply useful data supplementing the high-resolution coring in that area, provide data for validation of water concentrations calculated from sediment-water column models, and information that would be useful for comparison in any later expanded area C study.

Some additional points:

Use of a dye, such as rhodamine, would be of benefit for the time of travel water column sampling. Transect sampling during "high flow" events should, if possible, commence on the water rise.

Perform grain size analysis on suspended sediments.

Low-resolution Core Sampling

The Committee felt the description of the low-resolution coring program was not sufficiently specific. It was explained that the details of sampling program would be developed after completion of the Phase 2 geophysical program. A detailed low-resolution work plan addendum should be reviewed by the Committee upon its completion.

Sediment Critical Shear Stress

A concern was raised that the device to assess critical stress would induce non-uniform stress. This question should be fully resolved by discussions with Jim Bonner.

PCB Transformation

The degradation and dechlorination of PCB's in river sediments is complicated and not fully understood at this time. Congener specific transformations other than dechlorination can occur which may limit biological degradation. Laboratory experiments of Dr.Y-G Rhee on the dechlorination of PCB's by Hudson River sediment microorganisms indicate that only a fraction of the initial compounds can be accounted for. Without an understanding of such processes comparisons of archived and new cores may be of limited use. Work must proceed cautiously here and utilize relevant developing research.

Research in Areas C and D

There was extensive discussion by the Committee over research plans for Areas C and D. Six high-resolution cores will be taken in Area C and a similar number in D and the New York harbor area. The Phase 2 Plan emphasizes understanding the contribution of Area B to the contaminant burden in Areas C and D. Concern was expressed that we do not fully know the contribution of other sources of PCB to Areas C and D, either from effluent sources to the Hudson or from sediments located in C and D. It was noted that PCB discharge records in Area C will be reviewed and that the EPA's Water Division will be sampling for PCB's at sewage outfalls and tributaries in Area D. Data from this planned sampling program should be available for incorporation in a Phase 2 report. Nevertheless, there remained considerable unease among several committee members with the limited emphasis on Areas C and D.

It is evident that a revision of the Phase 2 Work Plan incorporating an expanded effort in Areas C and D would lead to a substantial and undesirable delay. However, as the Superfund site extends to the Battery, the Scientific and Technical Committee would greatly benefit from an appraisal of the EPA's considerations of possible activites in Areas C and D as they develop,

particularly in how such activities might impact on the current work plans under committee review. This could be done during a designated portion of a future Committee meeting.

Submitted by:
William J. Nicholson
Mount Sinai School of Medicine
212-241-5822